

**Remarks****35 U.S.C. § 103 Rejection of Claims**

In the 30 December 2005 Office Action, claims 36 - 71 are rejected as being unpatentable over Marshall (US Patent 6,073,115) in view of Sheppard (U.S. Patent 6,026,397).

The Assignee respectfully traverses the § 103 rejections of claims 36 - 71 in four ways. First, by noting that the Office Action cites a combination of references that teaches away from the proposed combination. Second, by noting that the cited combination of references fails to establish a *prima facie* case of obviousness. Third, by noting that the cited combination of references fails to make the invention as a whole obvious. Fourth, by noting that the Office Action does not teach how the cited references could be combined to produce anything useful. The Assignee also notes that there are still other ways in which all § 103 obviousness rejections in the 30 December 2005 Office Action for claims 36 - 71 can be traversed.

MPEP § 2145 X.D.2 provides that "it is improper to combine references where the references teach away from their combination." Marshall teaches a virtual reality generator for displaying abstract information (Marshall, Title). Marshall goes on to state that "the information displayed in (the) virtual reality world created by the present invention is abstract information about the real world that does not have a physical object equivalent in the real world (Marshall, Column 3, lines 49 – 54). At the same time, Sheppard teaches the identification of customers with a physical object equivalent in the real world and the related development of information about these customers. More specifically, a primary use of the Sheppard invention is the identification of unusual customers (Sheppard, Column 2, line 50) and the development of information about them (Sheppard, Column 2, line 51). It should be obvious that the unusual customers identified by Sheppard have physical object equivalents in the real world. It clearly would be improper to combine an invention for displaying information about things that don't have a physical equivalent in the real world with an invention for identifying unusual customers that do exist in the real world. In short, Sheppard and Marshall teach away from their proposed combination. The Assignee notes that there still other ways in which the two inventions teach away from their own combination.

As discussed previously, the 30 December 2005 Office Action fails to establish the prima facie case of obviousness required to sustain § 103 rejections of claim 36 - 71. MPEP 2142 provides that in order to establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation to modify the reference or combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

As detailed below, the 30 December 2005 Office Action fails to meet all three of the criteria for establishing a prima facie case of obviousness for claims 36 - 71.

The 30 December 2005 Office Action fails to meet the first criteria for establishing a prima facie case of obviousness for claims 36 - 71 because the two references (Marshall and Sheppard) teach away from the theoretical combination contained in the Office Action as described previously. It is well established that "teachings of references can be combined only if there is some suggestion or incentive to do so" quoting ACS Hosp. Sys., Inc. v Montefiore Hosp., 732 F.2d 1572, 1577 221 U.S.PQ 929,933 (Fed. Cir. 1984). Another reason the proposed theoretical combination fails to meet the first criteria is that there is no incentive to make the combination. Marshall teaches that dynamically visualizing changes in abstract information can help users understand stock price changes over time (Column 7, Lines 39 - 56). At the same time, a primary use of the Sheppard invention is the identification of unusual customers (Sheppard, Column 2, line 50) and the development of information about them (Sheppard, Column 2, line 51). Because unusual customers are concrete – that is they exist in the real world - there is no incentive to make the combination. In other words, Sheppard develops information about concrete entities like customers while Marshall teaches away from the use of concrete information to understand stock price movement. The Assignee notes again that there still other ways in which the two inventions teach away from their own combination.

The 30 December 2005 Office Action fails to meet the second criteria for establishing a prima facie case of obviousness for claims 36 - 71 because it does not cite a combination of teachings that has a reasonable expectation of success. There are at least two reasons why the cited combination of reference does not have a reasonable expectation of success.

The first reason the combination would be expected to fail is that the cited references teach away from their own combination. Sheppard helps identify, classify, analyze and sort customers and other concrete entities while Marshall teaches away from the use of information about concrete entities to understand stock price movement. As a result, the combination of the two could not reasonably be expected to support the development and/or use of a coherent view of stock price movement, portfolio management and/or anything else.

The second reason the combination would be expected to fail is that the completion of the independent and dependent claims requires the use of a series of data processing and/or analytical steps that are new, novel and/or non-obvious. The claimed invention relies on a number of methods, systems and/or media also disclosed in one or more cross-referenced applications. The prosecution to date of these cross-referenced patent applications has documented the fact that there are approximately (200) instances of novelty, non obviousness and/or newness relative to the state of the art that are incorporated in the methods, media and/or systems utilized in the claimed invention. The evidence of novelty, non-obviousness and/or newness relative to the state of the art was established in a variety of ways including: a documented inability to produce similar results, a teaching away from claimed methods, a documented failure to recognize the problem, a teaching away from claimed combinations and/or a failure to anticipate claimed methods, systems etc. The table below identifies the references that Examiners for cross referenced applications have used to document the state of the art. This documentation has in turn generated an overwhelming body of evidence that documents the novelty, non-obviousness and newness of the claimed invention.

Fields that have provided evidence of novelty, non-obviousness and/or newness	Cited References	Applications
Data Processing	Bowman-Amuah, Lyons, Marshall, Ranger, Subramanian et al	09/764,068, 09/940,450, 10/282,113
Financial Analysis/Management	Agpar, Bielinski, Brown, Harhen, Lyons, Marshall, Reilly, USPAP	08/999,245, 09/761,671, 09/764,068, 10/282,113
Real Estate	Agpar, Jost	09/761,670, 09/761,671
Portfolio Management/Security Analysis	Atkins, Kant, Marshall Sandretto,Sheppard	09/293,336, 09/761,670, 09/764,068

In order to have a reasonable chance of success, the cited combination of references would have to identify shortcomings in the documented state of the art and/or teach the new, novel and/or non-obvious methods disclosed in one or more cross-referenced applications. The 30 December 2005 Office Action fails to cite references that provide the required teachings. In some cases, the cited references re-enforce the previously documented state of the art. It is worth noting that the previously presented references documenting the state of the art teach away from the proposed combination and provide specific teachings as to why the proposed theoretical combination would be expected to fail. Even more telling, the cited combination of references documents additional instances of the novelty, non-obviousness and/or newness of the claimed invention.

In short, the second reason the cited combination would be expected to fail is because completion of the required processing requires a substantial advance relative to the state of the art that has been defined by the Examiner for this application as well as the Examiners of cross referenced applications. As detailed above, the cited combination of references fails to teach the required advances while documenting additional instances of novelty, newness and/or non-obviousness in the claimed invention.

Summarizing the above discussion, the orthogonal teachings of the cited references and a substantial body of evidence developed by the Examiners of cross-referenced applications (and the current application) provides convincing proof that the cited combination is an almost certain failure not a probable success. The Assignee notes that there are still other ways in which the absence of a reasonable expectation of success for the cited combination can be documented for the proposed theoretical combination.

The 30 December 2005\_Office Action fails to meet the third criteria for establishing a *prima facie* case of obviousness because it does not teach or suggest one or more limitations for every claim.

Far from establishing a *prima facie* case of obviousness for claims 36 - 71, the cited combination of references in the 30 December 2005 Office Action provides additional evidence that the claimed invention for producing concrete, tangible and useful results is new, novel and non-obvious. It does this by calling for a combination of references when the cited references teaches away from their proposed combination, by advocating a

combination of references that is an almost certain failure and by relying on a combination of references that fails to suggest or make obvious almost all of the claim limitations.

Another way the combination of references cited 30 December 2005\_Office Action fails to establish a prima facie case of obviousness for claims 36 - 71 is that it fails to make the invention as a whole obvious as required by MPEP § 2141.02 which states that:

In determining the difference between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious but whether the claimed invention as a whole would have been obvious.

As noted previously, the obviousness rejections are based on a combination of Marshall and Sheppard. Marshall and Sheppard each teach away from the method of the instant application in a number of ways. As noted previously, the two references also teach away from their own combination. Taken together the cited combination of references fails to make the invention as a whole obvious. The cited combination also fails to make a single aspect of the claimed invention obvious. These failures provide additional evidence that the claimed invention for producing concrete, tangible and useful results is new, novel and non-obvious.

The fourth way the 30 December 2005 Office Action fails to establish a prima facie case of obviousness is that it does not teach how a data analysis system and a virtual reality system could be combined to produce anything useful. It is well established that "particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed" (In re Kotzab, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000)). In spite of this well known requirement, the Office Action has not described how the teachings of these references would be combined or the reason for doing so. Furthermore, as detailed above, the reference teachings make it obvious that the cited combination should not be made and that once made it could not reasonably be expected to produce anything useful.

The Assignee notes again that there are still other ways in which all §103 obviousness rejections in the 30 December 2005 Office Action for claims 36 – 71 can be traversed.

**Request for an affidavit**

The above referenced application combines novel inventions in artificial intelligence (class 706), business methods (class 705) and data processing (class 707) to, among other things, enable the integrated analysis, management and optimization of operations and market value for a commercial enterprise. An explicit teaching of the claimed invention is that the physical operation of a commercial enterprise (aka current operation) has an impact on the market value of a commercial enterprise.

In the 30 December 2005 Office Action, the Examiner has claimed that Marshall (U.S. Patent 6,073,115), a tool for share price analysis, can be combined with another reference to obviate the claimed invention. As noted above, Marshall teaches that abstract information drives share prices for a commercial enterprise and that the concrete performance of the current operation is not a factor. The Assignee takes note of the fact that the Examiner has previously claimed that other security pricing and portfolio management applications - including those of Atkins, Sandretto and Tull Jr.- can be used alone or in combination to obviate the claimed inventions and/or the claimed inventions in one or more cross referenced applications. It is worth noting that Atkins, Sandretto and Tull Jr. also fail to mention the current operation (aka the physical production function) as a factor in determining a security price and/or the efficient management of a portfolio. These omissions are not surprising because these references apparently rely on modern theories of finance such as the CAPM/Efficient Market Theory (Tull Jr. and Atkins) and/or the Arbitrage Pricing Theory (Sandretto). The Chambers reference makes it clear that these theories also teach that the performance of the current operation is not considered to be a factor in determining share price and market value. Chambers states:

The modern theories of the financial firm and the firm making physical production decisions are, for the most part, distinct. Cochrane (2001) discusses the rationale for treating production and finance separately. Where finance theory typically takes production and resource allocation decisions as given and focuses on asset (aka *security\**) price determination, much of microeconomics and macroeconomics does the opposite by taking asset (aka *security\**) prices as given and focusing on resource allocation decisions.

*\*(italicized text in parentheses added by assignee)*

Consequently, any effort to use the references based on these theories alone or in combination with other references as relevant prior art for the claimed invention would require a reference or references that:

- a) teaches the need for a change in the assumptions of these theories in order to support an integrated analysis of operations and market value;
- b) teaches the new calculations that would be required to rework these theories in light of the new assumptions; and
- c) teaches the new conclusions derived from analyses completed using the different assumptions.

It is the Assignee's understanding that, in accordance with MPEP 904.03, the Examiner has previously completed searches and presented the best references available for the Office Actions that cited Atkins, Marshall, Sandretto and/or Tull Jr.. Because these Office Actions did not include a reference that provided any of the required teachings (a, b or c), the Assignee presumes that the Examiner has based the decision to use these references on facts in the personal knowledge of an employee of the Office. 37 C.F.R. 1.104 provides that:

*When a rejection in an application is based on facts within the personal knowledge of an employee of the Office, the data shall be as specific as possible, and the reference must be supported, when called for by the applicant, by the affidavit of such employee, and such affidavit shall be subject to contradiction or explanation by the affidavits of the applicant and other persons.*

Accordingly, the Assignee requests that an affidavit detailing the facts in the personal knowledge of any employee(s) of the Office that were used to support the assertions that Atkins, Marshall, Sandretto and/or Tull Jr.. can be used alone or in combination to obviate the claimed invention be provided on or before the date of the next Office Action for the above referenced application.

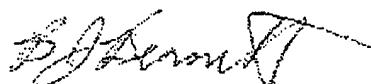
Reservation of rights

The Assignee hereby explicitly reserves the right to present the modified and/or canceled claims for re-examination in their original format. The cancellation or modification of pending claims to put the instant application in a final form for allowance and issue is not to be construed as a surrender of subject matters covered by the original claims before their cancellation or modification.

Conclusion

The pending claims are of a form and scope for allowance. Prompt notification thereof is respectfully requested.

Respectfully submitted,



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Examiner: Clement Graham  
Art Unit: 3628